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## NOTICE OF ALLOWANCE AND FEE(S) DUE

58404

7590

05/07/2009

BARRY W. CHAPIN  
CHAPIN INTELLECTUAL PROPERTY LAW, LLC  
WESTBOROUGH OFFICE PARK  
1700 WEST PARK DRIVE, SUITE 280  
WESTBOROUGH, MA 01581

EXAMINER

SHIN, KYUNG H.

ART UNIT

PAPER NUMBER

2443

DATE MAILED: 05/07/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,334	12/31/2003	Stanislav Sosnovsky	EMC03-35(03166)	4693

TITLE OF INVENTION: METHODS AND APPARATUS FOR PROVIDING EXTENSIBLE LIGHTWEIGHT SERVICES IN A DATA STORAGE ENVIRONMENT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	08/07/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

58404 7590 05/07/2009

**BARRY W. CHAPIN**  
**CHAPIN INTELLECTUAL PROPERTY LAW, LLC**  
**WESTBOROUGH OFFICE PARK**  
**1700 WEST PARK DRIVE, SUITE 280**  
**WESTBOROUGH, MA 01581**

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,334 12/31/2003 Stanislav Sosnovsky EMC03-35(03166) 4693

**TITLE OF INVENTION: METHODS AND APPARATUS FOR PROVIDING EXTENSIBLE LIGHTWEIGHT SERVICES IN A DATA STORAGE ENVIRONMENT**

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	08/07/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHIN, KYUNG H	2443	709-223000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/750,334

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WESTBOROUGH, MA 01581

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1340 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1340 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/750,334

**Applicant(s)**

SOSNOVSKY ET AL.

**Examiner**

Kyung Hye Shin

**Art Unit**

2443

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1-30-09.
2. ☒ The allowed claim(s) is/are 1 - 9, 11 - 17, 21 - 32, 34, 36 - 40.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/J Bret Dennison/  
Primary Examiner, Art Unit 2443

### DETAILED ACTION

1. Claims **1 - 9, 11 - 17, 21 - 32, 34, 36 - 40** are pending.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Christopher J. Lutz, Esq. (Registration No.: 44,883) on 4/20/2009.

3. The application has been amended as follows:

Amended independent claims are **1, 15, 21, 34, 36, 40**

1. (Currently Amended) A method for interprocess communication in a managed information architecture comprising:

identifying a module server stored in memory;

receiving a registration from a service entity in the memory in the managed information architecture, the registration indicative of a significant occurrence in the managed information architecture and the service entity responsive to the significant occurrence;

establishing a persistent association of the service entity and the significant occurrence in response to the registration, the persistent association providing a registered service entity, further including storing, in a global association table, an indication of the significant occurrence and an indication of the module containing the service entity, the global association table persistently independent of

enablement of the module including the service entity corresponding to the significant occurrence;

receiving a notification message indicative of the significant occurrence in the managed information architecture;

identifying, via the persistent association, the corresponding registered service entity responsive to the significant occurrence, the persistent association independent of enabling and disabling of the service entity;

enabling, if the identified registered service entity is disabled, a module including the service entity to activate the service entity; and

invoking, via the persistent association, the service entity responsive to the significant occurrence, the persistent association being defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity.

15. (Original) A method for invocation of subscribers comprising:

receiving a subscription associative of a service entity and a significant occurrence, the service entity having instructions operative for executing and completing a particular task upon an indication of the significant occurrence;

associating the significant occurrence with the service entity, the association including a generic reference applicable to a plurality of service entities, the association further operable to selectively enable a module including the service entity upon the significant occurrence, the association further being a persistent association independent of enabling and disabling of the service entity;  
storing, in a global association table, an indication of the significant occurrence and an indication of the module containing the service entity, the global association table

persistently independent of enablement of the module including the service entity corresponding to the significant occurrence;

receiving the indication of the significant occurrence;

determining, via the association, the corresponding service entity and the module including the service entity;

selectively enabling the module including the service entity to activate the service entity; and

dispatching the service entity to execute and complete the time based task, the persistent association being defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity.

21. (Original) A services architecture for interprocess communication in a managed information system comprising:

a module server stored in memory operable to receive a registration from a service entity in the managed information system, the registration indicative of a significant occurrence in the managed information system and the service entity responsive to the significant occurrence;

a service provider in the module server operable to establish a persistent association of the service entity and the significant occurrence in response to the registration, the persistent association independent of the enablement of the service entity, the persistent association providing a registered service entity for the service provided by the service entity, the persistent association independent of enabling and disabling of the service entity;

an association mapping for storing the persistent association and adapted to map a received notification indicative of the significant occurrence in the managed information system, the service operable to identify, via the persistent association,

the corresponding registered service entity responsive to the significant occurrence, the association mapping including a global association table, having an indication of the significant occurrence and an indication of the module containing the service entity, the global association table persistently independent of enablement of the module including the service entity corresponding to the significant occurrence; and

an activation manager operable to enable, if the identified registered service entity is disabled, a module including the service entity to activate the service entity, the module server operable to invoke, via the persistent association, the service entity responsive to the significant occurrence, the persistent association being defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity.

34. (Currently Amended) A computer program product having a computer readable storage medium operable to store computer program logic embodied in computer program code encoded thereon that, when executed by a processor responsive to instructions in the computer program code cause the computer to perform a method for interprocess communication in a managed information architecture, the method comprising:

receiving a registration from a service entity in the managed information architecture, the registration indicative of a significant occurrence in the managed information architecture and the service entity responsive to the significant occurrence;

establishing a persistent association of the service entity and the significant occurrence in response to the registration, the persistent association independent of the enabling and disabling of the service entity, the persistent association providing a registered service entity, further including storing, in a global association table, an



indication of the significant occurrence and an indication of the module containing the service entity, the global association table persistently independent of enablement of the module including the service entity corresponding to the significant occurrence;

receiving a notification indicative of the significant occurrence in the managed information architecture;

identifying, via the persistent association, the corresponding registered service entity responsive to the significant occurrence;

enabling, if the identified registered service entity is disabled, a module including the service entity to activate the service entity; and

invoking, via the persistent association, the service entity responsive to the significant occurrence, the persistent association being defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity.

36. (Currently Amended) A services architecture for interprocess communication in a managed information architecture comprising:

a module server stored in memory;

means for receiving a registration from a service entity in the managed information architecture, the registration indicative of a significant occurrence in the managed information architecture and the service entity responsive to the significant occurrence;

means for establishing a persistent association of the service entity and the significant occurrence in response to the registration, the persistent association independent of the enablement of the service entity and independent of enabling

and disabling of the service entity, the persistent association providing a registered service entity, further including means for storing, in a global association table, an indication of the significant occurrence and an indication of the module containing the service entity, the global association table persistently independent of enablement of a module including the service entity corresponding to the significant occurrence;

means for receiving a notification indicative of the significant occurrence in the managed information architecture;

means for identifying, via the persistent association, the corresponding registered service entity responsive to the significant occurrence;

means for enabling, if the identified registered service entity is disabled, a module including the service entity to activate the service entity; and

means for invoking, via the persistent association, the service entity responsive to the significant occurrence, the persistent association being defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity.

40. (New) A method for interprocess communication in a managed information architecture comprising:

receiving a registration from a service entity in the managed information architecture, the registration indicative of a significant occurrence in the managed information architecture and the service entity responsive to the significant occurrence;

establishing a persistent association of the service entity and the significant occurrence in response to the registration, the persistent association independent of the enabling and disabling of the service entity, the persistent association providing a registered service entity;

receiving a notification message indicative of the significant occurrence in the managed information architecture;

identifying, via the persistent association, the corresponding registered service entity responsive to the significant occurrence;

enabling, if the identified registered service entity is disabled, a module in the module server including the service entity, wherein the service entities are handlers corresponding to executable methods and the indication messages are events propagated by an invocation mechanism as a result of the significant occurrence service entity; and

invoking, via the persistent association, the service entity responsive to the significant occurrence, invoking further comprising:

identifying associated data indicative of the significant occurrence;

assembling an invocation call, the invocation call including a reference to the service entity and a reference to the identified associated data; and

executing the referenced service entity in the context of the referenced associated data to activate the service entity, executing further comprising a dispatch command, the dispatch command specific to the handler responsive to the significant occurrence and operative to enqueue multiple invocations to the same service entity, the persistent association being defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity.

#### ***Allowable Subject Matter***

4. The following is an examiner's statement of reasons for allowance:

Claims 1, 15, 21, 34, 36, 40 are allowed based on the following:

Prior art of record considered individually or in combination, fails to fairly show or suggest further including storing, in a global association table, an indication of the significant occurrence of an indication of the module containing the service entity, the global association table persistently independent of enablement of the mode including the service entity corresponding to the significant occurrence;

and specifically that:

- disabling the module including the service entity; and selectively enabling, in response to the significant occurrence, the module including the service entity, wherein the persistent association is independent of enabling and disabling of the service entity;
- the received registration employs a genericizing reference for identifying the service entity, the genericizing reference operable to avoid extraneous references and further operable for registration of a plurality of service entities, each of the service entities independent of references of other of the plurality of service entities;
- the persistent association is defined by a set of tables including the association, the set of tables for traversing the published significant occurrence from the detecting class entity to the service entity to be invoked as a result of the significant occurrence, at least one of the set of tables being a persistent table, the persistent table remaining active beyond the activation of the service entity;

and in addition to the other limitations in the specific manner as recited in claims  
**1 - 9, 11 - 17, 21 - 32, 34, 36 - 40.**

Claims **2 - 9, 11 - 14** are allowed due to allowed base claim **1**.

Claims **16, 17** are allowed due to allowed base claim **15**.

Claims **22 - 32** are allowed due to allowed base claim **21**.

Claims **37 - 39** are allowed due to allowed base claim **36**.

So as indicated by the above statements, Applicant's arguments have been considered persuasive, in light of the set of claims with limitations as well as the enabling portions of the specification. The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claims as well as for the further limitations set forth.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Hye Shin whose telephone number is (571)272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L. Dollinger can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kyung Hye Shin  
Examiner  
Art Unit 2443

KHS  
4/21/09

/J Bret Dennison/

Primary Examiner, Art Unit 2443